

FARMERS' ADOPTION OF HIGH YIELDING AROMATIC RICE VARIETIES DEVELOPED AT RARS, TITABAR AND THEIR ASSOCIATED PRACTICES BY THE FARMERS IN JORHAT DISTRICT OF ASSAM

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ABSTRACT

The present investigation was carried out in Jorhat district of Assam, following Ex-Post-Facto research design with a view to examining the extent of adoption of high yielding aromatic rice varieties and their associated practices. The study covered the location specific high yielding aromatic rice varieties developed by Regional Agricultural Research Station, Titabar and found that the overall adoption of high yielding aromatic rice varieties and their associated practices was of medium level. In case of recommended practice wise adoption level, the study revealed that all the respondents (100.00%) fully adopted the recommended varieties, a practice of seed selection and sowing time of seeding. It was found that the majority of respondent fully adopted the practices such as; gap filling, the number of seedling per hill and transplanting time, application of urea and SSP, practices of number of split application of urea. The practices of the nursery bed size and quantity of seed, spacing, application of recommended dose of MOP, timing of split application of urea were the practices partially adopted by a majority of the respondents. However, it could further be seen that the majority of the respondents did not adopt the important improved cultivation practices such as; plant protection measure in a seedbed and in the main field. So, there is a need to adopt the full-improved recommended package of practices for increasing the productivity with quality in aromatic rice.

KEYWORDS: Adoption. Aromatic Rice & Package of Practices

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INTRODUCTION

Among the different category of rice, aromatic rice is nature's gift to the Indian sub-continent and humankind at large. Compared to other classes of rice, aromatic rice is highly demanded and get a better premium price in the global market due to its pleasant aroma, superfine long, slender grains with delicate curvature, remarkable linear elongation and excellent flaky soft texture on cooking. There is a market of aromatic rice throughout India. As a post-effect of globalization, India is now exporting aromatic rice to different countries viz. Middle East countries, the USA, the UK, Australia and Canada, South Africa, etc. and at present, the farmers are getting attractive prices from these markets (Roy and Bandyopadhyay, 2014).

The aromatic rice of Assam is a unique class under Sali rice traditionally known as 'Joha'. This class of rice has high demand in domestic market and is used mainly for the preparation of special dishes like table rice,

Kheer, Pulao, and frumenty. The Joha rice cultivars are known for their unique aroma, superfine kernel, good cooking qualities and excellent palatability.

MATERIALS AND METHODS

The district Jorhat of Assam consisting of two sub-divisions have been selected purposively for the present study. A multi-stage purposive cum random sampling design was followed to draw a sample of 120 farmers.

A extent of adoption of high yielding aromatic rice varieties cultivation practices by the farmers was measured in terms of deviation from the recommendation. On the basis of these, responses of farmers were classified into three categories viz., full adoption, partial adoption, and no adoption. If a farmer was found to adopt a given practice as per recommendation, it was considered as 'full adoption' which was assigned a score of 2. A deviation from the recommended practice was considered as 'partial adoption' which was assigned a score of 1. Farmers who did not follow the recommended practice at all was considered as 'no adoption' and assigned a score of 0. The extent of adoption was calculated for 19 selected high yielding aromatic rice varieties cultivation practices as recommended by Assam Agricultural University and Department of Agriculture, Govt. of Assam.

The total score obtained by a respondent was calculated by adding the adoption scores for all the practices followed by that respondent. The data were collected by personally interviewing the sample respondent. The data were processed and analyzed by means of descriptive statistics. Categorizations of adoption score were done on the basis of the mean ($\bar{X}$) and standard deviation (S. D.) of obtained scores

RESULTS AND DISCUSSIONS

It is appearing from the Table 1 that the majority (68.33%) of the respondents had a medium level of extent of adoption, followed by 16.67 per cent of the respondents having high levels of the extent of adoption of high yielding varieties of aromatic rice and their associated practices. Moreover, 15 percent of the respondents had low levels of the extent of adoption of high yielding varieties of aromatic rice and their associated practices. It was due to non-availability of desired inputs in time locally, inadequate supply of farm machinery, poor irrigation facility, poor market facility, and poor extension contact. The mean and standard deviation (SD) calculated were 25.74 and 2.15 respectively.

In case of recommended practice wise adoption level, from the table 2, the study revealed that all the respondents (100.00%) fully adopted the recommended varieties, practice of seed selection and sowing time of seeding. Majority of the respondents (93.33%) and (73.33%) had partially adopted the practices of the nursery bed size and quantity of seed respectively. It was observed that, the majority of the respondents (86.66%) did not adopt the practice of plant protection measures in seed bed. It was found that the majority of the respondents (46.67%) fully adopted the practice of gap filling. The majority of the respondents (72.5%) and (69.17%) fully adopted the practice of number of seedlings per hill and maintained transplanting time respectively. A majority of the respondents (73.33 %) and (54.17%) partially adopted the practice of row to row and plant to plant spacing respectively. It was found that majority of the respondents (55.83%) and (50%) fully adopted urea and SSP respectively. Regarding the application of recommended dose of MOP, majority of the respondents (41.67%) partially adopt the practice. It was found that majority of the respondents (82.5%) fully adopted the practice of number of split application of urea. Again, Majority of the respondents (60%) and (66.67%) partially adopted following the recommendations of timing and split application of urea respectively. The majority of the respondents

(75.83%) did not adopt the recommended plant protection measure in case of pest followed by 17.5 per cent of the total respondents partially adopted the plant protection measure and 6.67 percent of the total respondents fully adopted the plant protection measure.

Table 1: Distribution of Respondents Based on Extent of Adoption of High Yielding Varieties of Aromatic Rice and Their Associated Practices

	Category	Score Range	Frequency	Percentage	Mean	S. D.
1	Low	<23.59	18	15.00	25.74	2.15
2	Medium	23.59-27.90	82	68.33		
3	High	>27.90	20	16.67		
Total			120	100		

Table 2: Practice- Wise Distributions of Respondents against the Extent of Adoption of High Yielding Aromatic Varieties of Rice and Their Associated Practices

(N=120)

Sl. No.	Practices	Full Adoption Frequency (%)	Partial Adoption Frequency (%)	No Adoption Frequency (%)
1.	High yielding variety	120(100.00)	0	0
2.	Seed selection	120(100.00)	0	0
3.	Nursery bed preparation			
I.	Nursery bed size	8(6.67)	112(93.33)	0
II.	Quantity of seed	32(26.67)	88(73.33)	0
III.	Plant protection measures in seed bed	2(1.67)	14(11.67)	104(86.66)
4.	Sowing time	120(100.00)	0	0
5.	Gap filling	56(46.67)	34(28.33)	30(25)
6.	Transplanting			
I.	No. of seedlings per hill	87(72.5)	33(27.5)	0(0.00)
II.	Transplanting time	83(69.17)	37(30.33)	0(0.00)
7.	Spacing			
I.	Plant to plant spacing	32(26.67)	88(73.33)	0(0.00)
II.	Row to row spacing	55(45.83)	65(54.17)	0(0.00)
8.	Basal method of fertilizer application			
i.	Urea	67(55.83)	53(44.17)	0(0.00)
ii.	SSP	60(50)	42(35)	18(15)
iii.	MOP	24(20)	50(41.67)	46(38.33)
9.	Split application of urea			
I.	No. of split application of urea	99(82.5)	14(11.67)	7(5.84)
II.	Time of application	41(34.17)	72(60)	7(5.84)
III.	Dose	33(27.5)	80(66.67)	7(5.84)
10.	Plant protection measures			
I.	Pest	8(6.67)	21(17.5)	91(75.83)
II.	Disease	0(0.00)	0(0.00)	0(0.00)

CONCLUSIONS

The adoption of high yielding aromatic rice growers as noted in this study is supported by the findings made by Sheikh (1993) and Saikia (2016). Here, it may be pointed out that it is no use to adopt some of the improved practices only and neglecting some other ones. It is necessary to use the complete package of the improved practices of high yielding aromatic production for reaching maximization in crop yields.

REFERENCES

1. Roy, D. and Bandyopadhyay, A. K. (2014). "Factors contributing towards adoption of aromatic rice production technology in Nadia district of West Bengal", *Journal of crop and weed*. **10**(2):166-169.
2. Saikia, P. (2016). A study on adoption og improved practices of boropaddy cultivation by the farmers of Biswanath sub-division, Sonitpur (Assam). Unpublished M. Sc. Thesis, Deptt. of Extn. Edn. FA, Biswanath College.
3. Sangeeta Sharma et al., , Content Analysis and Readability of Farm Issues of an Assamese Daily, *International Journal of Agricultural Science and Research (IJASR)*, Volume 6, Issue 4, July - August 2016, pp. 1-4
4. Sheikh, P. K. (1993). "A study on adoption of selected recommended practices for cultivation of scented rice crop by the farmers of Jammu district of Jammu and Kashmir State" of unpublished M. Sc. Thesis dept. of Extension Education, FA, A. A. U. Jorhat.